REMARKS/ARGUMENTS

Favorable reconsideration of the present application is respectfully requested.

Claim 3 has been amended responsive to the objection thereto.

Claim 2 has been new rejected under 35 U.S.C. § 102 as being anticipated by U.S. patent 6,645,108 (Gradu). This rejection is respectfully traversed.

Claim 2 recites gradual switching control means for electrically controlling a driving power transmission device to gradually change a present torque to a target torque, at the time of the switching from a two-wheel drive mode to a four-wheel drive mode, only when the difference between the present and target torques after switching to the four-wheel drive mode is more than a predetermined value. This has the advantage of minimizing torque shock when switching from the two-wheel drive mode to the four-wheel drive mode (page 3, lines 21-26), but the torque reduction can be applied immediately in the case of small torque differences. Gradu, on the other hand, neither teaches torque control at the time of the switching from a two-wheel drive mode to a four-wheel drive mode, nor the claimed feature of gradually changing the torque only when the difference between the present and target torques is more than a predetermined value.

Gradu discloses a full-time four wheel drive vehicle wherein the torque from an input shaft 32 is apportioned between the primary and secondary axles 12 and 20 by a torque bias coupling 44 (col. 3, lines 18-20). The coupling 44 provides two paths for the full time delivery of torque to the secondary output shaft 36; one a purely mechanical path in which no slippage can occur and the other a clutch path in which slippage may occur in the clutch 50 (col. 3, lines 39-42). Since the clutch 50 transmits torque while accommodating slippage, it dissipates power which manifests itself as heat. A control process for operating the vehicle takes into account the limited capacity of the clutch 50 to dissipate such heat. To this end, it calculates the clutch slip which corresponds to the difference between the speeds of the input

shaft 32 and the output shaft 36 and compares the actual difference to an optimum difference (col. 3, lines 26-34). The actual and optimum torques being transmitted through the coupling 44 are also compared. If the actual speed differential is less than the optimal speed differential, the torque transmitted through the clutch path is reduced, which decreases the torque transmitted through coupling 44, to reduce the power dissipation (paragraph bridging cols. 6-7).

There is no description in Gradu of determining a difference between a present torque and a target torque after switching from a two-wheel drive mode to a four-wheel drive mode. Indeed, Gradu has no relevance to a means for performing such determination since Gradu is a full-time four wheel drive system and lacks a two wheel drive mode.

In any case, the gradual current change in the clutch 50 of Gradu to reduce the torque through the coupling 44, which was noted in the Office Action, is triggered by a *speed* differential between the input shaft 32 and the output shaft 36, and not a difference between a present and a target *torques*. Thus Gradu also fails to teach the claimed feature of gradually changing the torque only when the difference between the present and target *torques* is more than a predetermined value, and so differs from the invention in several respects.

Claim 4 also recites gradual switching control means for electrically controlling a driving power transmission device to gradually change a present torque to a target torque, at the time of the switching from a two-wheel drive mode to a four-wheel drive mode, *only* when the difference between the present and target torques after switching to the four-wheel drive mode is more than a predetermined value, and further recites switching inhibiting means for inhibiting switching from a two-wheel drive mode to a four wheel drive mode when the vehicle is traveling at a lower speed than a predetermined value and the rotational speed difference between front and rear wheels is larger than a predetermined difference.

Claim 4 was rejected under 35 U.S.C. § 103 as being obvious over Takahashi et al in view of Gradu. According to this rejection, Takahashi et al lacks the claimed gradual switching control means responsive to a difference between a present torque and a target torque after switching to a four wheel drive mode, and so Gradu was cited to teach the gradual switching control means. However, as explained above, Gradu does not switch from a two wheel drive mode, and does not determine the difference between a present torque and a target torque after switching to a four-wheel drive mode, and so could not supply a teaching to overcome the shortcomings of Takahashi et al.

The remaining claims depend from Claims 2 or 4 and are patentable for at least the reasons already noted.

Applicants therefore believe that the present application is in a condition for allowance and respectfully solicit an early Notice of Allowability.

Respectfully submitted,

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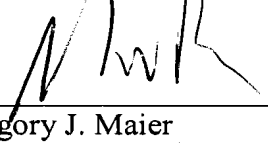

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